CLAIMS

1.   An information management apparatus for processing data containing personal

data comprising:

5   personal data extraction means for extracting personal data from processing-

object data;

unique code generation means for performing an operation using one-way

function on the basis of personal data extracted by said personal data extraction means, to

generate a unique code; and

10   primary conversion data generation means for replacing personal data of said

processing-object data with said unique code, to generate primary conversion data.

2.   An information management apparatus as recited in claim 1, which further

comprises storage means for storing said primary conversion data and said processing-

15   object data on which said primary conversion data are based in a state in which these data

are correlated with each other.

3.   An information management apparatus as recited in claim 1, wherein said

unique code generation means comprises a reference character string generation means for

20   generating a reference character string from personal data extracted by said personal data

extraction means, and operation means for operating a predetermined processing-object

character string by means of said one-way function using said reference character string as

a key, to generate said unique code.

5   4.   An information management apparatus as recited in claim 3, wherein said

operation means comprises digit number determination means for determining an operation

digit number on the basis of said reference character string, processing-object character

string generation means for generating an processing-object character string having said

operation digit number and operation execution means for operating said processing-object

10   character string by means of said one-way function using said reference character string as

a key.

5.   An information management apparatus as recited in claim 1, which further

comprises a secondary conversion data generation means for encrypting said primary

15   conversion data to generate secondary conversion data, output means for outputting said

secondary conversion data to other apparatus, and storage means for storing said outputted

secondary conversion data, said primary conversion data on which said secondary

conversion data are based, said processing-object data on which said primary conversion

data are based and records of output from said output means in a state in which these data

20   and records are correlated with one another when said secondary conversion data are

outputted from said output means.

6.   An information management system which comprises an information

management apparatus for processing data containing personal data and an information

5   center apparatus for managing data processed with said information management apparatus,

the information management apparatus and the information center apparatus being

connected to each other through a communication line;

said information management apparatus comprising:

personal data extraction means for extracting personal data from processing-

10   object data;

unique code generation means for performing an operation using one-way

function on the basis of personal data extracted by said personal data extraction means to

generate a unique code;

primary conversion data generation means for replacing the personal data of

15   said processing-object data with said unique code to generate primary conversion data;

secondary conversion data generation means for encrypting said primary

conversion data to generate secondary conversion data;

output means for outputting said secondary conversion data to said

information management apparatus through said communication line; and

20   storage means for storing, when said secondary conversion data are outputted

from said output means, said outputted secondary conversion data, said primary conversion

data as an original of said secondary conversion data, said processing-object data as an

original of said primary conversion data and records of the output made by said output

means, in a state in which they are correlated with one another;

5   said information center apparatus comprising:

          receiving means for receiving secondary conversion data transmitted from said

information management apparatus; and

          decryption means for decrypting secondary conversion data received by said

receiving means to generate said primary conversion data.

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7.   An information management system as recited in claim 6, wherein said

information center apparatus further comprises data storage means for storing primary

conversion data generated by said decryption means and processes data stored in said data

storage means by means of said unique code as a key.

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8.   An information management system as recited in claim 7, wherein said

information center apparatus detects data containing the same unique code from a plurality

of data containing said unique codes stored in said data storage means.

20   9.   A program for causing an information management computer for processing

data containing personal data to execute processing comprising the steps of:

extracting personal data from processing-object data by means of personal

data extraction means,

performing an operation using a one-way function on the basis of the personal

5   data extracted by said personal data extraction means by means of unique code generation

means to generate a unique code, and

replacing personal data of said processing-object data with said unique code

by means of primary conversion data generation means to generate primary conversion

data.

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10.   The program of claim 9, which is for causing said information management

computer to execute the processing which further comprises the step of storing said

primary conversion data and said processing-object data as an origin of said primary

conversion data in storage means in a state in which they are correlated with each other.

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11.   The program of claim 9, wherein the step of generating the unique code by

said unique code generation means comprises the steps of:

generating a reference character string from personal data, which are extracted

by said personal data extraction means, by means of a reference character string generation

20   means; and

operating a predetermined operation-object character string by means of said

one-way function using said reference character string as a key to generate said unique

code.

5   12.   The program of claim 11, wherein the step of generating said unique code with

said operation means comprises the steps of:

determining an operation digit number on the basis of said reference character

string by means of digit number determination means;

generating an operation-object character string having said operation digit

10   number by means of operation-object character string generation means; and

operating said operation-object character string by means of said one-way

function by operation execution means using said reference character string as a key.

13.   The program of claim 9, which is for causing said information management

15   computer to execute the processing which further comprises the steps of:

encrypting said primary conversion data by means of   secondary conversion

data generation means to generate secondary conversion data;

outputting said secondary conversion data to other apparatus by output means;

and causing storage means, when said secondary conversion data are outputted

20   from said output means, to store said outputted secondary conversion data, said primary

conversion data as an origin of said secondary conversion data, said processing-object data as an origin of said primary conversion data and records of the output from said output means, in a state in which they are correlated with one another.